



PALM INTRANET

Day : Tuesday
Date: 7/6/2004
Time: 09:10:25

Inventor Name Search

Enter the **first few letters** of the Inventor's Last Name.

Additionally, enter the **first few letters** of the Inventor's First name.

Last Name

First Name

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Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | Home page

Refine Search

Search Results -

Term	Documents
(13 NOT 5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	48
(L13 NOT L5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	48

Database:
 US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
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 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search: Huang-Leaf.in.

Search History

DATE: Tuesday, July 06, 2004 [Printable Copy](#) [Create Case](#)

<u>Set</u>	<u>Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side				result set
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES;		
OP=AND				
<u>L14</u>	L13 not L5		48	<u>L14</u>
<u>L13</u>	L12 and ((DNA adj vaccine) or (genetic adj immunization))		50	<u>L13</u>
<u>L12</u>	L11 and (DNA or plasmid or vector)		889	<u>L12</u>
<u>L11</u>	(conjugation or conjugate) same ((antibody or Ab) and (polycationic or polyethylenimine or polyimmine or polylysine or PEI))		1021	<u>L11</u>
<u>L10</u>	(Ab-PEI-DNA)		0	<u>L10</u>
<u>L9</u>	L7 and L3		1	<u>L9</u>
<u>L8</u>	L7 and L2		6	<u>L8</u>
<u>L7</u>	(Expression adj library) adj immunization		68	<u>L7</u>
<u>L6</u>	L5 and ((DNA adj vaccine) or (genetic adj immunization))		4	<u>L6</u>
<u>L5</u>	L2 and L3		43	<u>L5</u>

<u>L4</u>	L2 same L3	2	<u>L4</u>
<u>L3</u>	(polycationic or polyethylenimine or polyimmine or polylysine) same (conjugate)	1352	<u>L3</u>
<u>L2</u>	(aggregated or macroaggregated) same (protein or albumin or antibody)	5088	<u>L2</u>
<u>L1</u>	Orson-Frank-M\$.in.	1	<u>L1</u>

END OF SEARCH HISTORY

Welcome to DialogClassic Web(tm)

Dialog level 04.11.00D
Last logoff: 01jul04 16:26:33
Logon file001 06jul04 11:25:52

*** ANNOUNCEMENT ***

--File 654 - US published applications from March 15, 2001 to the present are now online. Please see HELP NEWS 654 for details.

--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

--File 990 - NewsRoom now contains February 2004 to current records. File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest month's records roll out of File 990 and into File 992 on the first weekend of each month. To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.

--Connect Time joins DialUnits as pricing options on Dialog.
See HELP CONNECT for information.

*** --SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.

--Important Notice to Freelance Authors--
See HELP FREELANCE for more information

NEW FILES RELEASED

***MetalBase (File 36)
***AeroBase (File 104)
***DIOGENES: Adverse Drug Events Database (File 181)
***World News Connection (File 985)
***Dialog NewsRoom - 2003 Archive (File 992)
***TRADEMARKSCAN-Czech Republic (File 680)
***TRADEMARKSCAN-Hungary (File 681)
***TRADEMARKSCAN-Poland (File 682)

UPDATING RESUMED

RELOADED

***Toxfile (File 156)
***Medline (Files 154-155)
***Population Demographics - (File 581)
***CLAIMS Citation (Files 220-222)

REMOVED

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
>>> of new databases, price changes, etc. <<<

KWIC is set to 50.

HIGHLIGHT set on as ' '

* * * *

File 1:ERIC 1966-2004/Jun 09
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Set	Items	Description
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Cost is in DialUnits
?
B 155, 159, 5, 73
 06jul04 11:26:41 User259876 Session D646.1
 \$0.62 0.178 DialUnits File1
 \$0.62 Estimated cost File1
 \$0.20 INTERNET
 \$0.82 Estimated cost this search
 \$0.82 Estimated total session cost 0.178 DialUnits

SYSTEM:OS - DIALOG OneSearch
File 155: MEDLINE(R) 1966-2004/Jun W2
 (c) format only 2004 The Dialog Corp.
***File 155: Medline has been reloaded. Accession numbers have changed. Please see HELP NEWS 154 for details.**
File 159: Cancerlit 1975-2002/Oct
 (c) format only 2002 Dialog Corporation
***File 159: Cancerlit ceases updating with immediate effect.**
Please see HELP NEWS.
File 5: Biosis Previews(R) 1969-2004/Jun W4
 (c) 2004 BIOSIS
File 73: EMBASE 1974-2004/Jun W4
 (c) 2004 Elsevier Science B.V.

Set	Items	Description
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?
S (AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
 37412 AGGREGATED
 1642 MACROAGGREGATED
 4188970 PROTEIN
 1308420 ANTIBODY
 310868 LIGAND
 279985 ALBUMIN
S1 15417 (AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY
OR LIGAND OR ALBUMIN)

?
S S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION))
 15417 S1
 2574560 DNA
 284815 VECTOR
 2492137 GENE
 1577250 GENETIC
 202627 IMMUNIZATION
 952 GENETIC(W) IMMUNIZATION
S2 1278 S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W)
IMMUNIZATION))

?
S S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENIMINE OR POLYIMMINE OR PEI)
 1278 S2
 2730 POLYCATIONIC
 10182 POLYLYSINE
 1 POLYETHYLENIMINE
 0 POLYIMMINE
 3958 PEI
S3 7 S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENIMINE OR
POLYIMMINE OR PEI)

?
RD
...completed examining records
 S4 3 RD (unique items)
?

T S4/3, K/ALL

4/3, K/1 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)
(c) format only 2004 The Dialog Corp. All rts. reserv.

12190474 PMID: 12526712
Novel shielded transferrin-polyethylene glycol-polyethylenimine/DNA complexes for systemic tumor-targeted gene transfer.

Kursa Malgorzata; Walker Greg F; Roessler Vanessa; Ogris Manfred; Roedl Wolfgang; Kircheis Ralf; Wagner Ernst
Pharmaceutical Biology-Biotechnology, Department for Pharmacy,
Ludwig-Maximilians-Universitaet, Butenandtstrasse 5-13, D-81377 Muenchen,
Germany.

Bioconjugate chemistry (United States) Jan-Feb 2003, 14 (1) p222-31,
ISSN 1043-1802 Journal Code: 9010319

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Tumor-targeting DNA complexes which can readily be generated by the mixing of stable components and freeze-thawed would be very advantageous for their subsequent application as medical products. Complexes were generated by the mixing of plasmid DNA, linear polyethylenimine (PEI22, 22 kDa) as the main DNA condensing agent, PEG- PEI (poly(ethylene glycol)-conjugated PEI) for surface shielding, and Tf-PEG- PEI (transferrin-PEG- PEI) to provide a ligand for receptor-mediated cell uptake. Within the shielding conjugates, PEG chains of varying size (5, 20, or 40 kDa) were conjugated with either linear PEI22 (22 kDa) or branched PEI25 (25 kDa). The three polymer components were mixed together at various ratios with DNA; particle size, surface charge, in vitro transfection activity, and systemic gene delivery to tumors was investigated. In general, increasing the proportion of shielding conjugate in the complex reduced surface charge, particle size, and in vitro transfection efficiency in transferrin receptor-rich K562 cells. The particle size or surface charge of the complexes containing the PEG- PEI conjugate did not significantly change after freeze-thawing, while complexes without the shielding conjugate aggregated. Complexes containing PEG- PEI conjugate efficiently transfected K562 cells after freeze-thawing. Furthermore the systemic application of freeze-thawed complexes exhibited in vivo tumor targeted expression. For complexes containing the luciferase reporter gene the highest expression was found in tumor tissue of mice. An optimum formulation for in vivo application, PEI22/Tf-PEG- PEI /PEI22-PEG5, containing plasmid DNA encoding for the tumor necrosis factor (TNF-alpha), inhibited tumor growth in three different murine tumor models. These new DNA complexes offer simplicity and convenience, with tumor targeting activity in vivo after freeze-thawing.

4/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155: MEDLINE(R)
(c) format only 2004 The Dialog Corp. All rts. reserv.

11586546 PMID: 11741272
DNA/polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Ogris M; Steinlein P; Carotta S; Brunner S; Wagner E
Institute of Biochemistry, University of Vienna, Vienna, Austria.
manfred.ogris@cup.uni-muenchen.de

AAPS pharmSci electronic resource (United States) 2001, 3 (3) pE21,
ISSN 1522-1059 Journal Code: 100897065

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Receptor-binding ligands have been incorporated into DNA

/polyethylenimine (PEI) complexes to enhance cell binding and cellular internalization. This study characterizes receptor-mediated uptake of DNA / PEI complexes on a cellular basis. A novel assay based on flow cytometry was applied, discriminating between total cell-associated and extracellularly bound DNA complexes. Receptor-mediated uptake of ligand-containing DNA / PEI (molecular weight, 800 kd) complexes was found to occur quickly (within 1 hour), whereas unspecific uptake through adsorptive endocytosis is less efficient or requires extended periods to reach the same degree of internalization. Rapid, receptor-mediated internalization requires a small complex size; however, large, aggregated complexes show higher gene expression. Using PEI 25 kd conjugated to large proteins such as transferrin or antibodies, improper condensation with DNA leads to suboptimal uptake and gene expression, whereas partial replacement of ligand - PEI with unconjugated PEI increases both uptake and transfection. In contrast, the 8 kd protein epidermal growth factor conjugated to PEI 25 kd properly condenses DNA and mediates specific uptake into human adenocarcinoma (KB) cells. Modification of the complex surface with appropriate amounts of poly(ethylene glycol) (PEG) does not block ligand-mediated internalization. A higher degree of PEGylation reduces the internalization of transferrin or antibody-containing complexes to a level similar to that of ligand-free complexes. In contrast, epidermal growth factor "mediated uptake is less effected by excessive PEGylation.

4/3,K/3 (Item 3 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2004 The Dialog Corp. All rts. reserv.

11347280 PMID: 11437332

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

Patel S; Zhang X; Collins L; Fabre J W

Department of Clinical Sciences, Guy's, King's and St Thomas' School of Medicine, King's College Hospital, London, UK.

journal of gene medicine (England) May-Jun 2001, 3 (3) p271-9,

ISSN 1099-498X Journal Code: 9815764

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: The serpin-enzyme complex receptor (SECR) has previously been successfully targeted for gene delivery using synthetic peptide ligands covalently linked in fluid phase to commercially available polylysine preparations (approximately 10-54kDa). The objective of the present study was to improve this approach by the use of small, bifunctional, and easily standardised synthetic peptides. **METHODS:** Two synthetic peptides designated polylysine antitrypsin 1 (PAT1) (K16 FNKPFVFLI) and PAT2 (K16 CSIPPEVKFNKPFVFLI) were evaluated for gene delivery to the HUH7 human hepatocyte cell line. The K16 moiety binds DNA electrostatically, while the FVFLM motif of human alpha1-antitrypsin targets the SECR. **RESULTS:** Both PAT1 and PAT2 bind to and condense DNA into small particles as shown by laser scattering techniques. However, only PAT2 is effective for gene delivery, presumably on account of the greater distance between the K16 chain and the FVFLM motif. Gene delivery by PAT2/ DNA complexes is chloroquine-dependent, can be blocked completely by free ligand (CSIPPEVKFNKPFVFLI), and is highly efficient (e.g. approximately five-fold more effective than lipofectamine). At physiological salt concentrations, PAT2/ DNA complexes formed at 4 microg/ml DNA are approximately 350 nm in diameter and highly effective for gene transfer, but at 100 microg/ml DNA the complexes are aggregated (diameter > 4 microm) and inactive.

CONCLUSIONS: A small (33 amino acid), bifunctional, synthetic peptide represents a highly efficient and readily standardised DNA vector for

the SECR. The effectiveness of this peptide depends on the distance of the K16 moiety from the targeting ligand . High salt concentrations are not required to form effective vector DNA complexes.

?

Set Items Description
S1 15417 (AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2 1278 S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3 7 S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR - POLYIMMINE OR PEI)
S4 3 RD (unique items)
?
S S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMMINE OR PEI)
 1278 S2
 2730 POLYCATIONIC
 10182 POLYLYSINE
 3 POLYETHYLENEIMINE
 0 POLYIMMINE
 3958 PEI
S5 11 S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMMINE OR PEI)
?
RD S5
...completed examining records
 S6 5 RD S5 (unique items)
?
S S6 NOT S3
 5 S6
 7 S3
 S7 2 S6 NOT S3
?
T S7/3,K/ALL

7/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)
(c) format only 2004 The Dialog Corp. All rts. reserv.

12372498 PMID: 12749911
The phosphocholine and the polycation-binding sites on rabbit C-reactive protein are structurally and functionally distinct.
Black Steven; Agrawal Alok; Samols David
Department of Biochemistry, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106, USA.
Molecular immunology (England) Jun 2003, 39 (16) p1045-54, ISSN 0161-5890 Journal Code: 7905289
Contract/Grant No.: AG02467; AG; NIA; AR40765; AR; NIAMS; DK07319; DK; NIDDK
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

C-reactive protein (CRP) is an acute phase protein in humans and rabbits that has the ability to bind a number of biologically important ligands including phosphocholine (PCh), histones, and polycations. In addition to this recognition function, ligand -complexed or aggregated CRP is capable of activating the classical complement pathway. We have generated two strains of transgenic mice in order to study CRP-binding to PCh and consequent complement activation. Based on crystallographic and mutagenesis studies in human CRP (huCRP), we mutated Phe66 and Glu81 in the rabbit CRP (rbCRP) gene and generated a strain of transgenic mice (F66Y/E81K), which expressed this variant form of rbCRP. We also mutated Tyr175 in rbCRP to generate transgenic...

... rbCRP are distinct but possibly overlapping. The conformational changes in the C1q-binding site of CRP to activate complement depend on the nature of the **ligand** and on the location of the **ligand**-binding site.

Descriptors: C-Reactive Protein--chemistry--CH; *C-Reactive Protein--metabolism--ME; *Complement Pathway, Classical; *Phosphorylcholine--metabolism--ME; **Polylysine**--metabolism--ME

Chemical Name: Cations; Histones; Polyamines; Polysaccharides, Bacterial; Serum Albumin, Bovine; polycations; polysaccharide C-substance (Streptococcus); Phosphorylcholine; **Polylysine**; Lysine; Complement 1q; C-Reactive Protein

7/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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10029483 PMID: 8146151

Utilization of modified surfactant-associated protein B for delivery of DNA to airway cells in culture.

Baatz J E; Bruno M D; Ciraolo P J; Glasser S W; Stripp B R; Smyth K L; Korfhagen T R

Department of Pediatrics, Medical University of South Carolina, Charleston 29425-3313.

Proceedings of the National Academy of Sciences of the United States of America (UNITED STATES) Mar 29 1994, 91 (7) p2547-51, ISSN 0027-8424

Journal Code: 7505876

Contract/Grant No.: 45961; PHS

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... lines the airway epithelium and creates a potential barrier to successful transfection of the epithelium *in vivo*. Based on the functional properties of pulmonary surfactant **protein B** (SP-B) and the fact that this **protein** is neither toxic nor immunogenic in the airway, we hypothesized that SP-B could be modified to deliver **DNA** to airway cells. We have modified native bovine SP-B by the covalent linkage of poly(lysine) (average molecular mass of 3.3 or 10...

... was determined by transfection of pulmonary adenocarcinoma cells (H441) in culture with the test plasmid pCPA-RSV followed by measurement of activity of the reporter **gene** encoding chloramphenicol acetyltransferase (CAT). Transfections were performed with **DNA** . **protein** complexes using poly(lysine)10kDa-SP-B ([Lys]10kDa-SP-B) or poly(lysine)3.3kDa-SP-B ([Lys]3.3kDa-SP-B), and results were compared with transfections using unmodified poly(lysine). **DNA**, unmodified SP-B. **DNA**, or **DNA** only. For [Lys]10kDa-SP-B.pCPA-RSV preparations, CAT activity was readily detectable above the background of [Lys]3.3kDa-SP-B or unmodified SP-B. The SP-B-poly(lysine) conjugates were effective over a broad range of **protein**-to- **DNA** molar ratios, although they were optimal at approximately 500:1-1000:1. Transfection efficiency varied with the tested cell line but was not specific to...

... spectrometry (FTIR). Results of FTIR indicated that the conformation of [Lys]10kDa-SP-B was comprised primarily of alpha-helical structure compared with a predominantly **aggregated** structure of unmodified poly(lysine). We conclude that poly(lysine) conjugates of SP-B effectively deliver **DNA** *in vitro* and may have utility as **DNA** delivery vehicles to the airway *in vivo*.

Descriptors: **DNA**, Recombinant--pharmacology--PD; *Drug Carriers--pharmacology--PD; * **Polylysine**--pharmacology--PD; *Proteolipids--pharmacology--PD; *Pulmonary Surfactants--pharmacology--PD; *Transfection--methods--MT

Chemical Name: DNA, Recombinant; Drug Carriers; Phosphatidylethanolamines ; Proteolipids; Pulmonary Surfactants; **Polylysine** ; 1,2-dielaidoylphosphatidylethanolamine; Chloramphenicol O-Acetyltransferase ?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMMINE OR PEI)
S6	5	RD S5 (unique items)
S7	2	S6 NOT S3
?		
S S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMINES OR PEI)		
	15417	S1
	2730	POLYCATIONIC
	10182	POLYLYSINE
	3	POLYETHYLENEIMINE
	2	POLYIMINES
	3958	PEI
S8	36	S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMINES OR PEI)
?		
RD S8	...completed examining records	
	S9	18 RD S8 (unique items)
?		
S S9 AND (DNA OR VECTOR OR GENE)		
	18	S9
	2574560	DNA
	284815	VECTOR
	2492137	GENE
S10	3	S9 AND (DNA OR VECTOR OR GENE)
?		
T S10/3,K/ALL		

10/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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12190474 PMID: 12526712

Novel shielded transferrin-polyethylene glycol-polyethylenimine/ DNA complexes for systemic tumor-targeted gene transfer.

Kursa Malgorzata; Walker Greg F; Roessler Vanessa; Ogris Manfred; Roedl Wolfgang; Kircheis Ralf; Wagner Ernst

Pharmaceutical Biology-Biotechnology, Department for Pharmacy, Ludwig-Maximilians-Universitaet, Butenandtstrasse 5-13, D-81377 Muenchen, Germany.

Bioconjugate chemistry (United States) Jan-Feb 2003, 14 (1) p222-31, ISSN 1043-1802 Journal Code: 9010319

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Novel shielded transferrin-polyethylene glycol-polyethylenimine/ DNA complexes for systemic tumor-targeted gene transfer.

Tumor-targeting DNA complexes which can readily be generated by the mixing of stable components and freeze-thawed would be very advantageous

for their subsequent application as medical products. Complexes were generated by the mixing of plasmid **DNA**, linear polyethylenimine (PEI22, 22 kDa) as the main **DNA** condensing agent, PEG- **PEI** (poly(ethylene glycol)-conjugated **PEI**) for surface shielding, and Tf-PEG- **PEI** (transferrin-PEG- **PEI**) to provide a **ligand** for receptor-mediated cell uptake. Within the shielding conjugates, PEG chains of varying size (5, 20, or 40 kDa) were conjugated with either linear PEI22 (22 kDa) or branched PEI25 (25 kDa). The three polymer components were mixed together at various ratios with **DNA**; particle size, surface charge, in vitro transfection activity, and systemic **gene** delivery to tumors was investigated. In general, increasing the proportion of shielding conjugate in the complex reduced surface charge, particle size, and in vitro transfection efficiency in transferrin receptor-rich K562 cells. The particle size or surface charge of the complexes containing the PEG- **PEI** conjugate did not significantly change after freeze-thawing, while complexes without the shielding conjugate **aggregated**. Complexes containing PEG- **PEI** conjugate efficiently transfected K562 cells after freeze-thawing. Furthermore the systemic application of freeze-thawed complexes exhibited in vivo tumor targeted expression. For complexes containing the luciferase reporter **gene** the highest expression was found in tumor tissue of mice. An optimum formulation for in vivo application, PEI22/Tf-PEG- **PEI**/PEI22-PEG5, containing plasmid **DNA** encoding for the tumor necrosis factor (TNF-alpha), inhibited tumor growth in three different murine tumor models. These new **DNA** complexes offer simplicity and convenience, with tumor targeting activity in vivo after freeze-thawing.

Descriptors: **DNA** --administration and dosage--AD; *Drug Carriers --chemistry--CH; *Gene Therapy; *Neoplasms, Experimental--therapy--TH; Animals; **DNA** --therapeutic use--TU; K562 Cells; Mice; Mice, Inbred Strains; Molecular Weight; Polyethylene Glycols--chemistry--CH; Polyethylenimine --chemistry--CH; Transfection; Transferrin--chemistry--CH; Treatment Outcome; Tumor...

Chemical Name: Drug Carriers; Polyethylene Glycols; Tumor Necrosis Factor; Transferrin; Polyethylenimine; **DNA**

10/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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11586546 PMID: 11741272

DNA/polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Ogris M; Steinlein P; Carotta S; Brunner S; Wagner E

Institute of Biochemistry, University of Vienna, Vienna, Austria.
manfred.ogris@cup.uni-muenchen.de

AAPS pharmSci electronic resource (United States) 2001, 3 (3) pE21,
ISSN 1522-1059 Journal Code: 100897065

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

DNA/polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Receptor-binding ligands have been incorporated into **DNA/polyethylenimine** (**PEI**) complexes to enhance cell binding and cellular internalization. This study characterizes receptor-mediated uptake of **DNA/PEI** complexes on a cellular basis. A novel assay based on flow cytometry was applied, discriminating between total cell-associated and extracellularly bound **DNA** complexes. Receptor-mediated uptake of **ligand**-containing **DNA/PEI** (molecular weight, 800 kd) complexes was found to occur quickly (within 1 hour), whereas unspecific uptake through adsorptive endocytosis is less efficient or requires extended periods to reach the same degree of internalization. Rapid, receptor-mediated internalization

requires a small complex size; however, large, aggregated complexes show higher gene expression. Using PEI 25 kd conjugated to large proteins such as transferrin or antibodies, improper condensation with DNA leads to suboptimal uptake and gene expression, whereas partial replacement of ligand - PEI with unconjugated PEI increases both uptake and transfection. In contrast, the 8 kd protein epidermal growth factor conjugated to PEI 25 kd properly condenses DNA and mediates specific uptake into human adenocarcinoma (KB) cells. Modification of the complex surface with appropriate amounts of poly(ethylene glycol) (PEG) does not block ligand-mediated internalization. A higher degree of PEGylation reduces the internalization of transferrin or antibody-containing complexes to a level similar to that of ligand -free complexes. In contrast, epidermal growth factor "mediated uptake is less effected by excessive PEGylation.

Descriptors: DNA --chemistry--CH; * Gene Transfer Techniques; *Polyethylene Glycols--chemistry--CH; *Polyethyleneimine; DNA --metabolism --ME; Drug Carriers; Endocytosis; Epidermal Growth Factor--chemistry--CH; Flow Cytometry; Genes, Reporter; Jurkat Cells; KB Cells; Ligands; Luciferase--genetics--GE; Luciferase--metabolism--ME...

Chemical Name: Drug Carriers; Ligands; Muromonab-CD3; Plasmids; Polyethylene Glycols; Transferrin; Epidermal Growth Factor; Polyethyleneimine; DNA ; Luciferase

10/3,K/3 (Item 3 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2004 The Dialog Corp. All rts. reserv.

11347280 PMID: 11437332

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

Patel S; Zhang X; Collins L; Fabre J W

Department of Clinical Sciences, Guy's, King's and St Thomas' School of Medicine, King's College Hospital, London, UK.

journal of gene medicine (England) May-Jun 2001, 3 (3) p271-9,

ISSN 1099-498X Journal Code: 9815764

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

BACKGROUND: The serpin-enzyme complex receptor (SECR) has previously been successfully targeted for gene delivery using synthetic peptide ligands covalently linked in fluid phase to commercially available polylysine preparations (approximately 10-54kDa). The objective of the present study was to improve this approach by the use of small, bifunctional, and easily standardised synthetic peptides. METHODS: Two synthetic peptides designated polylysine antitrypsin 1 (PAT1) (K16 FNKPFVFLI) and PAT2 (K16 CSIPPEVKFNKPFVFLI) were evaluated for gene delivery to the HUH7 human hepatocyte cell line. The K16 moiety binds DNA electrostatically, while the FVFLM motif of human alpha1-antitrypsin targets the SECR. RESULTS: Both PAT1 and PAT2 bind to and condense DNA into small particles as shown by laser scattering techniques. However, only PAT2 is effective for gene delivery, presumably on account of the greater distance between the K16 chain and the FVFLM motif. Gene delivery by PAT2/ DNA complexes is chloroquine-dependent, can be blocked completely by free ligand (CSIPPEVKFNKPFVFLI), and is highly efficient (e.g. approximately five-fold more effective than lipofectamine). At physiological salt concentrations, PAT2/ DNA complexes formed at 4 microg/ml DNA are approximately 350 nm in diameter and highly effective for gene transfer, but at 100 microg/ml DNA the complexes are aggregated (diameter > 4 microm) and inactive.

CONCLUSIONS: A small (33 amino acid), bifunctional, synthetic peptide

represents a highly efficient and readily standardised DNA vector for the SECR. The effectiveness of this peptide depends on the distance of the K16 moiety from the targeting ligand . High salt concentrations are not required to form effective vector DNA complexes.

Descriptors: Gene Transfer Techniques; *Receptors, Cell Surface
--metabolism--ME

?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMMINE OR PEI)
S6	5	RD S5 (unique items)
S7	2	S6 NOT S3
S8	36	S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMINES OR PEI)
S9	18	RD S8 (unique items)
S10	3	S9 AND (DNA OR VECTOR OR GENE)
?		
S	(AB-PEI-DNA) OR (AB-PEI-VECTOR)	
	0	AB-PEI-DNA
	0	AB-PEI-VECTOR
S11	0	(AB-PEI-DNA) OR (AB-PEI-VECTOR)
?		
S	(EXPRESSION (W) LIBRARY (W) IMMUNIZATION)	
	2265064	EXPRESSION
	143284	LIBRARY
	202627	IMMUNIZATION
S12	71	(EXPRESSION (W) LIBRARY (W) IMMUNIZATION)
?		
S	S12 AND S1	
	71	S12
	15417	S1
S13	0	S12 AND S1
?		
S	S12 AND REVIEW	
	71	S12
	1737797	REVIEW
S14	5	S12 AND REVIEW
?		
RD		
	...completed examining records	
S15	4	RD (unique items)
?		
T	S15/3, K/ALL	

15/3,K/1 (Item 1 from file: 5)
 DIALOG(R) File 5:Biosis Previews(R)
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0014924972 BIOSIS NO.: 200400295729
 Expression library immunization to discover and improve vaccine antigens

AUTHOR: Barry Michael A (Reprint); Howell Dasein P G; Andersson Helen A;
 Chen Jiang Li; Singh Rana A K

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JOURNAL: Immunological Reviews 199 (1): p68-83 June 2004 2004

MEDIUM: print
ISSN: 0105-2896
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Citation
LANGUAGE: English

Expression library immunization to discover and improve vaccine antigens

DESCRIPTORS:

METHODS & EQUIPMENT: expression library immunization --

MISCELLANEOUS TERMS: ...Literature Review

15/3,K/2 (Item 1 from file: 73)

DIALOG(R) File 73:EMBASE
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12221990 EMBASE No: 2003331777

Advances in the identification and characterization of protective antigens for recombinant vaccines against tick infestations

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J. De la Fuente, Dept. of Veterinary Pathobiology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK 74078 United States

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Expert Review of Vaccines (EXPERT REV. VACCINES) (United Kingdom)
2003, 2/4 (583-593)

CODEN: ERVXA ISSN: 1476-0584

DOCUMENT TYPE: Journal ; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 77

...identified and characterized, discovery of new antigens remains the limiting step for improving the efficacy of tick vaccines. Recent technologies developed for gene discovery, including expression library immunization and evaluation of expressed sequence tags, show promise for rapid, systematic and global antigen screening and should provide a comprehensive approach to selection of candidate...

MEDICAL DESCRIPTORS:

drug synthesis; ectoparasite; mosquito; pathogenesis; infection control; drug determination; drug efficacy; treatment outcome; immunization; disease transmission; drug formulation; vaccination; human; clinical trial; review ; priority journal

15/3,K/3 (Item 2 from file: 73)

DIALOG(R) File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

12040256 EMBASE No: 2003151720

Enhanced efficacy of DNA vaccines against an intracellular bacterial pathogen by genetic adjuvants

Leclercq S.; Harms J.S.; Oliveira S.C.

S.C. Oliveira, Department of Biochem./Immunology, Federal University of Minas Gerais, Inst. for Investigation Immunology, Av Antonio Carlos 6627, Belo Horizonte-MG 30161-970 Brazil

AUTHOR EMAIL: scozeus@icb.ufmg.br

Current Pharmaceutical Biotechnology (CURR. PHARM. BIOTECHNOL.) (Netherlands) 2003, 4/2 (99-107)

CODEN: CPBUB ISSN: 1389-2010

DOCUMENT TYPE: Journal ; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 97

...immunogens. Secondly, we reported the use of cytokine genes and genetic adjuvants that could improve the immunogenicity of target genes.

And finally, we discussed the " **Expression Library Immunization** " - (ELI) strategy and the recent results obtained against *Brucella abortus* infection.

MEDICAL DESCRIPTORS:

...bacterial virulence; DNA hybridization; cytokine production; cytotoxic T lymphocyte; muscle necrosis; muscle regeneration; immunostimulation; antigen presenting cell; drug potentiation; gene construct; CpG island; nonhuman; mouse; **review**

15/3,K/4 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

07436928 EMBASE No: 1998327856

DNA vaccines

Lai W.C.; Bennett M.

Dr. W.C. Lai, Department of Pathology, Texas Univ. Southwestern Med.

Ctr., 5323 Harry Hines Blvd., Dallas, TX 75235-9072 United States

Critical Reviews in Immunology (CRIT. REV. IMMUNOL.) (United States)

1998, 18/5 (449-484)

CODEN: CCRID ISSN: 1040-8401

DOCUMENT TYPE: Journal; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 235

...induction of injury to muscles prior to injection of DNA to enhance gene expression. Vaccination performed using DNA without knowing beforehand the protective epitopes, using ' **expression library immunization** ', is discussed. While this field is bound to expand rapidly for future clinical applications, we try to point out potential pitfalls as well as advantages

...

MEDICAL DESCRIPTORS:

protein expression; helper cell; aerosol; gene expression; dna library; antigen presenting cell; dendritic cell; immune response; drug effect; cloning vector; nonhuman; mouse; rat; animal cell; **review** ; priority journal

?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMMINE OR PEI)
S6	5	RD S5 (unique items)
S7	2	S6 NOT S3
S8	36	S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHYLENEIMINE OR POLYIMINES OR PEI)
S9	18	RD S8 (unique items)
S10	3	S9 AND (DNA OR VECTOR OR GENE)
S11	0	(AB-PEI-DNA) OR (AB-PEI-VECTOR)
S12	71	(EXPRESSION (W) LIBRARY (W) IMMUNIZATION)
S13	0	S12 AND S1
S14	5	S12 AND REVIEW
S15	4	RD (unique items)
?		
COST		

06jul04 11:42:52 User259876 Session D646.2
\$3.11 0.971 DialUnits File155

\$1.68 8 Type(s) in Format 3
\$1.68 8 Types
\$4.79 Estimated cost File155
\$0.75 0.256 DialUnits File159
\$0.75 Estimated cost File159
\$5.25 0.937 DialUnits File5
\$1.75 1 Type(s) in Format 3
\$1.75 1 Types
\$7.00 Estimated cost File5
\$7.82 0.798 DialUnits File73
\$8.10 3 Type(s) in Format 3
\$8.10 3 Types
\$15.92 Estimated cost File73
OneSearch, 4 files, 2.962 DialUnits FileOS
\$4.25 INTERNET
\$32.71 Estimated cost this search
\$33.53 Estimated total session cost 3.140 DialUnits

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